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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,687	03/06/2001	Edward L. Schwartz	74451.P127D6	5050

7590

03/15/2004

Michael J. Mallie
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EXAMINER

SHERALI, ISHRAT I

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/800,687

Applicant(s)

SCHWARTZ ET AL.

Examiner

Sherali Ishrat

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 10-24 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C 121:

I. Claims 1-9, drawn to performing refinement coding pass to bit planes and setting refinement bits to more probable symbol to implement quantization, classified in class 382, subclass 253.

II. Claims 10-12, drawn to quantizing each coefficient to one of a plurality of a potential values based on which of a plurality of associated ranges in which each coefficients resides, at least one of the potential values is not at the centroid of its associated range, classified in class 382, subclass 288.

III. Claims 13-24, drawn to overall combination of quantizing coefficients, classified in class 382, subclass 251.

2. The inventions are distinct, each from the other because of the following reasons: Inventions in Groups III, and I are related as combination and subcombination where the combination claims are 13-24 in Group III. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combination (MPEP 806.05 (c)). In the instant case, the combination as claimed does not require the particulars of the subcombinations as claimed in Group III and Group I, because the detail in the subcombination claims

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10-12, requires, performing refinement coding pass to bit planes and setting refinement bits to more probable symbol to implement quantization requires which is not recited in the combination claims 13-24. The subcombination has separate utility such as representing image with reduced resolution.

3. Inventions in Groups III, and II are related as combination and subcombination where the combination claims are 13-24 in Group III. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combination (MPEP 806.05 (c)). In the instant case, the combination as claimed does not require the particulars of the subcombinations as claimed in Group III and Group II, because the detail in the subcombination claims 10-12, requires, quantizing each coefficient to one of a plurality of a potential values based on which of a plurality of associated ranges in which each coefficients resides, at least one of the potential values is not at the centroid of its associated range which is not recited in the combination claims 13-24. The subcombination has separate utility such as measuring center of gravity or center point of image data.

4. Because these inventions are distinct for the reasons given above and acquired a separate status in the art as shown by their different classification and have divergent fields of search, restriction for examination purpose as indicated is proper.

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5. A telephone call was made to Michael J. Mallie on 3/3/04 to request an oral election to the above restriction requirement, Mr. Michael J. Mallie elected Group I with traverse. Detailed action on the elected claims 1-9 follows below.

Drawing

6. The drawing are objected to under 37 CFR 1.83 (a). The drawing must show every feature of the invention specified in claims. Therefore, the steps of the claimed method must be shown. Drawings does not illustrate any steps of the claims 1-9 such as setting refinement bits to more probable symbol.

7. The drawings are objected because handwritten characters inside the blocks of various drawing such as 6, 8 and 11 are not legible therefore not understood.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-9 are rejected under 35 USC § 102 (e) as being anticipated by Ordentlich et al (6, 263,109).

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Regarding claims 1, 4 and 7, Ordentlich discloses performing a refinement coding pass to bit-planes of a code block to create refinement bits (See Ordentlich, col. 4, lines 41-45, Ordentlich shows "Refinement information in a bit-plane refers to those bit-plane $[b_n, i]$ for which one of those bits $b_{m, i}, \dots, b_{n+1, i}$ are non-zero (that is information in the plane n for coefficient that has already found to be significant". Ordentlich shows performing a refinement coding pass to bit-planes of a code block to create refinement bits by determining significant bits in the plane n of coefficient [wavelet coefficient/ code block]),

setting refinement bits to more probable symbol (MPS) (See Ordentlich, col. 5, lines 13-15, "refinement information should precede all subsequences with significant probabilities" i.e Ordentlich shows refinement bits have highest probability and col. 6, lines 34-38, "shorter code lengths are assigned to the more probable sequences of symbol" i.e Ordentlich shows that since refinement bits have highest probability, shorter code lengths are applied to refinement bits which are more probable symbol).

Regarding claims 2, 5 and 8, Ordentlich discloses only portion of the refinement bits in a codeblock are set to MPS (See Ordentlich, col. 6, lines 29-32, "some of ordered sub-bit planes are encoded" therefore only portion of refinement bits in code block are set to MPS [shorter code lengths col. 6, lines 34-38] not all bits of refinement bits are coded).

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Regarding claims 3, 6 and 9 Ordentlich discloses setting of refinement bits to the MPS is performed to implement non-uniform quantization step sizes (See Ordentlich, See Ordentlich, col. 5, lines 13-15, "refinement information should precede all subsequences with significant probabilities" i.e Ordentlich shows refinement bits have highest probability and col. 6, lines 34-38, "shorter code lengths are assigned to the more probable sequences of symbol" i.e Ordentlich shows that since refinement bits have highest probability, shorter code lengths are applied to refinement bits which are more probable symbol" . Application in the system of Ordentlich of shorter code length [refinement bits] and larger code lengths is performed to implement non-uniform quantization.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherali Ishrat whose telephone number is 703-308-9589. The examiner can normally be reached on 8:00 AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau can be reached on 703-305-4706. The fax phone numbers for the organization where this application or proceeding is assigned are 703-87-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-4750.

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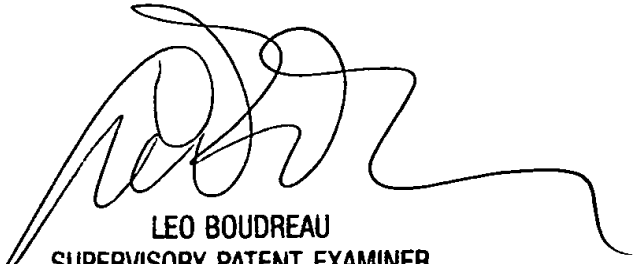
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Ishrat Sherali

Patent Examiner

Group Art Unit 2621

March 4, 2004


LEO BOUDREAU
SUPERVISORY PATENT EXAMINER
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